

# SEQUENCE LISTING

<110> Ajinomoto Co. Inc.

<120> Method for Producing L-Amino Acid Using Methylotroph

<130> OP1627/US-102

<140>

<141> 2003-11-

<150> JP 2002-336315

<151> 2002-11-20

<160> 14

<170> PatentIn Ver. 2.0

<210> 1

<211> 711

<212> DNA

<213> Brevibacterium lactofermentum

<220>

<221> CDS

<222> (1)..(711)

<400> 1

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ctt tta ctg tcc atc gga ccg cag aat gta ctg gtg att aaa caa gga   96
Leu Leu Leu Ser Ile Gly Pro Gln Asn Val Leu Val Ile Lys Gln Gly
   20               25               30
att aag cgc gaa gga ctc att gcg gtt ctt ctc gtg tgt tta att tct  144
Ile Lys Arg Glu Gly Leu Ile Ala Val Leu Leu Val Cys Leu Ile Ser
   35               40               45
gac gtc ttt ttg ttc atc gcc ggc acc ttg ggc gtt gat ctt ttg tcc  192
Asp Val Phe Leu Phe Ile Ala Gly Thr Leu Gly Val Asp Leu Leu Ser
   50               55               60
aat gcc gcg ccg atc gtg ctc gat att atg cgc tgg ggt ggc atc gct  240
Asn Ala Ala Pro Ile Val Leu Asp Ile Met Arg Trp Gly Gly Ile Ala
   65               70               75               80
tac ctg tta tgg ttt gcc gtc atg gca gcg aaa gac gcc atg aca aac  288
Tyr Leu Leu Trp Phe Ala Val Met Ala Ala Lys Asp Ala Met Thr Asn
   85               90               95
aag gtg gaa gcg cca cag atc att gaa gaa aca gaa cca acc gtg ccc  336
Lys Val Glu Ala Pro Gln Ile Ile Glu Glu Thr Glu Pro Thr Val Pro
  100               105               110
gat gac acg cct ttg ggc ggt tcg gcg gtg gcc act gac acg cgc aac  384
Asp Asp Thr Pro Leu Gly Gly Ser Ala Val Ala Thr Asp Thr Arg Asn
  115               120               125
cgg gtg cgg gtg gag gtg agc gtc gat aag cag cgg gtt tgg gta aag  432
Arg Val Arg Val Glu Val Ser Val Asp Lys Gln Arg Val Trp Val Lys
  130               135               140
ccc atg ttg atg gca atc gtg ctg acc tgg ttg aac ccg aat gcg tat  480
Pro Met Leu Met Ala Ile Val Leu Thr Trp Leu Asn Pro Asn Ala Tyr

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145		150		155		160	
ttg gac gcg ttt gtg ttt atc ggc ggc gtc ggc gcg caa tac ggc gac	528						
Leu Asp Ala Phe Val Phe Ile Gly Gly Val Gly Ala Gln Tyr Gly Asp							
		165		170		175	
acc gga cgg tgg att ttc gcc gct ggc gcg ttc gcg gca agc ctg atc	576						
Thr Gly Arg Trp Ile Phe Ala Ala Gly Ala Phe Ala Ala Ser Leu Ile							
		180		185		190	
tgg ttc ccg ctg gtg ggt ttc ggc gca gca gca ttg tca cgc ccg ctg	624						
Trp Phe Pro Leu Val Gly Phe Gly Ala Ala Ala Leu Ser Arg Pro Leu							
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tcc agc ccc aag gtg tgg cgc tgg atc aac gtc gtc gtg gca gtt gtg	672						
Ser Ser Pro Lys Val Trp Arg Trp Ile Asn Val Val Val Ala Val Val							
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225		230		235			

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<211> 236

<212> PRT

<213> Brevibacterium lactofermentum

<400> 2

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20 25 30	
Ile Lys Arg Glu Gly Leu Ile Ala Val Leu Leu Val Cys Leu Ile Ser	
35 40 45	
Asp Val Phe Leu Phe Ile Ala Gly Thr Leu Gly Val Asp Leu Leu Ser	
50 55 60	
Asn Ala Ala Pro Ile Val Leu Asp Ile Met Arg Trp Gly Gly Ile Ala	
65 70 75 80	
Tyr Leu Leu Trp Phe Ala Val Met Ala Ala Lys Asp Ala Met Thr Asn	
85 90 95	
Lys Val Glu Ala Pro Gln Ile Ile Glu Glu Thr Glu Pro Thr Val Pro	
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Asp Asp Thr Pro Leu Gly Gly Ser Ala Val Ala Thr Asp Thr Arg Asn	
115 120 125	
Arg Val Arg Val Glu Val Ser Val Asp Lys Gln Arg Val Trp Val Lys	
130 135 140	
Pro Met Leu Met Ala Ile Val Leu Thr Trp Leu Asn Pro Asn Ala Tyr	
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165 170 175	
Thr Gly Arg Trp Ile Phe Ala Ala Gly Ala Phe Ala Ala Ser Leu Ile	
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Trp Phe Pro Leu Val Gly Phe Gly Ala Ala Ala Leu Ser Arg Pro Leu	
195 200 205	
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<211> 1197

<212> DNA

<213> Escherichia coli

<220>

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<222> (272)..(1153)

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tgtcaaactg gttattcctt taagggtgta gttgttctta aggaaagcat aaaaaaaca 180
tgcatacaac aatcagaacg gttctgtctg cttgctttta atgccatacc aaacgtacca 240
ttgagacact tgtttgcaca gaggatggcc c atg ttc acg gga agt att gtc 292
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gcg att gtt act ccg atg gat gaa aaa ggt aat gtc tgt cgg gct agc 340
Ala Ile Val Thr Pro Met Asp Glu Lys Gly Asn Val Cys Arg Ala Ser
                               10      15      20

ttg aaa aaa ctg att gat tat cat gtc gcc agc ggt act tcg gcg atc 388
Leu Lys Lys Leu Ile Asp Tyr His Val Ala Ser Gly Thr Ser Ala Ile
                               25      30      35

gtt tct gtt ggc acc act ggc gag tcc gct acc tta aat cat gac gaa 436
Val Ser Val Gly Thr Thr Gly Glu Ser Ala Thr Leu Asn His Asp Glu
                               40      45      50      55

cat gct gat gtg gtg atg atg acg ctg gat ctg gct gat ggg cgc att 484
His Ala Asp Val Val Met Met Thr Leu Asp Leu Ala Asp Gly Arg Ile
                               60      65      70

ccg gta att gcc ggg acc ggc gct aac gct act gcg gaa gcc att agc 532
Pro Val Ile Ala Gly Thr Gly Ala Asn Ala Thr Ala Glu Ala Ile Ser
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ctg acg cag cgc ttc aat gac agt ggt atc gtc ggc tgc ctg acg gta 580
Leu Thr Gln Arg Phe Asn Asp Ser Gly Ile Val Gly Cys Leu Thr Val
                               90      95      100

acc cct tac tac aat cgt ccg tcg caa gaa ggt ttg tat cag cat ttc 628
Thr Pro Tyr Tyr Asn Arg Pro Ser Gln Glu Gly Leu Tyr Gln His Phe
                               105     110     115

aaa gcc atc gct gag cat act gac ctg ccg caa att ctg tat aat gtg 676
Lys Ala Ile Ala Glu His Thr Asp Leu Pro Gln Ile Leu Tyr Asn Val
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ccg tcc cgt act ggc tgc gat ctg ctc ccg gaa acg gtg ggc cgt ctg 724
Pro Ser Arg Thr Gly Cys Asp Leu Leu Pro Glu Thr Val Gly Arg Leu
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gcg aaa gta aaa aat att atc gga atc aaa gag gca aca ggg aac tta 772
Ala Lys Val Lys Asn Ile Ile Gly Ile Lys Glu Ala Thr Gly Asn Leu
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acg cgt gta aac cag atc aaa gag ctg gtt tca gat gat ttt gtt ctg 820
Thr Arg Val Asn Gln Ile Lys Glu Leu Val Ser Asp Asp Phe Val Leu
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ctg agc ggc gat gat gcg agc gcg ctg gac ttc atg caa ttg ggc ggt 868
Leu Ser Gly Asp Asp Ala Ser Ala Leu Asp Phe Met Gln Leu Gly Gly
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cat ggg gtt att tcc gtt acg act aac gtc gca gcg cgt gat atg gcc 916
His Gly Val Ile Ser Val Thr Thr Asn Val Ala Ala Arg Asp Met Ala
                               200     205     210     215

cag atg tgc aaa ctg gca gca gaa gaa cat ttt gcc gag gca cgc gtt 964
Gln Met Cys Lys Leu Ala Ala Glu Glu His Phe Ala Glu Ala Arg Val
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att aat cag cgt ctg atg cca tta cac aac aaa cta ttt gtc gaa ccc 1012
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Asn	Pro	Ile	Pro	Val	Lys	Trp	Ala	Cys	Lys	Glu	Leu	Gly	Leu	Val	Ala		
		250					255					260					
acc	gat	acg	ctg	cgc	ctg	cca	atg	aca	cca	atc	acc	gac	agt	ggg	cgt	1108	
Thr	Asp	Thr	Leu	Arg	Leu	Pro	Met	Thr	Pro	Ile	Thr	Asp	Ser	Gly	Arg		
	265					270					275						
gag	acg	gtc	aga	gcg	gcg	ctt	aag	cat	gcc	ggg	ttg	ctg	taa			1150	
Glu	Thr	Val	Arg	Ala	Ala	Leu	Lys	His	Ala	Gly	Leu	Leu					
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<211> 292

<212> PRT

<213> Escherichia coli

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		35					40					45					
Ala	Thr	Leu	Asn	His	Asp	Glu	His	Ala	Asp	Val	Val	Met	Met	Thr	Leu		
	50					55					60						
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	65				70					75					80		
Ala	Thr	Ala	Glu	Ala	Ile	Ser	Leu	Thr	Gln	Arg	Phe	Asn	Asp	Ser	Gly		
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	225				230					235					240		
Asn	Lys	Leu	Phe	Val	Glu	Pro	Asn	Pro	Ile	Pro	Val	Lys	Trp	Ala	Cys		
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Lys	Glu	Leu	Gly	Leu	Val	Ala	Thr	Asp	Thr	Leu	Arg	Leu	Pro	Met	Thr		
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Pro	Ile	Thr	Asp	Ser	Gly	Arg	Glu	Thr	Val	Arg	Ala	Ala	Leu	Lys	His		
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